Report of the Committee on Uniform Municipal Accounting and Statistics

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On behalf of the Committee on Uniform Municipal Accounting and Statistics, I beg to submit the following report, which, like the reports of 1901 and 1902, is a report of progress.

During the past year two new members have been added to the Committee, viz., Mr. Blacklock, of Baltimore, Md., and Mr. Worthington C. Ford, of Washington, D. C. Dr. Edward W. Bemis, of Cleveland, Ohio, has resigned from the Committee, and Mr. Charles W. Haskins, of New York City, has died.

Charles W. Haskins.

The loss of Mr. Haskins will be keenly felt. He was an active and valued member of the Committee from the date of its organization early in 1901, and had rendered signal service to the cause of uniform accounting by his success in securing the adoption by the government of Chicago of certain recommendations of this Committee relating to the classification of accounts and the form of its comptroller's report. In his professional capacity as head of the firm of Haskins & Sells, expert accountants, he was instrumental in systematizing both the book-keeping and the reports of the Chicago comptroller's office, in accordance with improved modern methods.

During the year the Committee has held three meetings, one in Boston, one in Philadelphia, and one in New York. Each meeting was devoted to the elaboration and improvement of the series of schedules recommended for trial by the Committee in their reports of 1901 and 1902. As those reports are to be found in the proceedings of the Rochester and Boston meetings of the League, it is not necessary to describe them with particularity in this connection; especially as Mr. Chase's paper, which will

follow this report, will deal with the distinctive features of the schedules and forms of summary statement contained in our previous reports, in so far as they have been embodied in the Ohio scheme of uniform accounting.

However, it may be noted, in passing, that it is not the purpose of this Committee to elaborate a system of municipal book-keeping for adoption by all cities, but rather to devise a practicable scheme for summarizing the accounts of any city, whatever its method of book-keeping may be, under the form of what may be termed a "model comptroller's report." In accordance with this policy, and with full recognition of the great diversity which obtains in the financial statistics and reports of American cities, the schedules thus far recommended by this Committee have been avowedly tentative and necessarily elastic in their nature. Moreover, we have always endeavored to determine their practicability by putting them to the test of actual use. Thus, at Rochester, in 1901, we presented, in connection with our report, the report of the auditor of the City of Newton, Massachusetts, who, with the coöperation of Mr. Chase, of this Committee, in an appendix summarized the receipts and expenditures of Newton for the year 1900, in accordance with the recommendations of this Committee as embodied in its Schedule D. Similarly, as a part of our report, at Boston, in 1902, we presented in printed form a "Statement of the Receipts and Expenditures of the City of Boston for the fiscal year 1900–01, grouped according to the 'Uniform System' of the National Municipal League," which was prepared by the Statistics Department of Boston for the use of the Committee. This year Mr. Chase, of this Committee, in his capacity of expert accountant and auditor, has secured the adoption of some of our schedules by the city auditor of Cambridge, Massachusetts, in his report for the year ending November 30, 1902. Again, the Report of the Comptroller of the City of Baltimore, for the year 1902, is arranged throughout in accordance with our system of grouping receipts and expenditures according to the function subserved by the departments of the City Government. As our scheme is in the experimental stage, and our various schedules

Purpose of Committee.

are still undergoing testing and trial, we deem it inadvisable to make final recommendations at this time. Before giving final shape to our schedules, we desire to benefit by the experience and criticism of a still larger number of comptrollers and auditors.

The most notable occurrence in the line of progress toward uniform municipal accounting in the past year was the passage last summer by the Ohio Legislature of an act to secure uniform accounts and financial reports from all cities in the state. The Ohio authorities have had the professional advice of Mr. Chase, who is a member of this Committee, in perfecting their organization and in shaping schedules, forms of report, etc. Before their final adoption the Ohio schedules were submitted to this Committee for consideration. These schedules are in substantial accord with our tentative schedules of 1902.

The Ohio Act.

At the instance of the Merchants' Association of New York, an investigation of the methods employed in keeping the accounts of the City of New York has been undertaken with a view to securing simpler and more intelligible reports of the financial operations of that city. The investigation, which is still in progress, is in charge of Mr. Ford, who is a member of this Committee. His report is awaited with interest.

A bill modeled upon the Ohio act for securing uniformity in municipal accounts was introduced early in the session of the present Legislature of Massachusetts. The bill, which has aroused opposition from local authorities, is still in committee.

The list of publications in which ordinary and extraordinary receipts and expenditures are given separately, and at the same time are arranged by groups of departments (according to the functional import of the department) under general heads, e. g., General Government, Public Safety, is as follows:

Adoption of Schedules.

1. City of Newton, Massachusetts, Annual Report of the City Auditor for the year ending December 31, 1900, together with an Appendix of the Receipts and Expenditures of the city, arranged according to the Uniform System of the National Municipal

Newton, Massachusetts.

League, Newton, 1901. (The Appendix is a summary statement, conforming with Schedule D, 1901, arranged by Mr. Harvey S. Chase, of this Committee.)

2. Annual Report of the City Comptroller to the Mayor and City Council of Baltimore for the Fiscal Year ending December 31, 1901, Baltimore, 1902. Appendix.

Baltimore. Summary of Receipts and Expenditures arranged according to the Uniform System of the National Municipal League. (This summary corresponds with Schedule D, 1901.)

3. Report of Expert Accountant appointed by the Selectmen to examine the accounts of the Town of Brookline. (Brookline, 1902.) (The Summary of Re-

Brookline. ceipts, Appropriations and Expenditures for the year 1901–02 is arranged by Mr. Chase, who made the report according to Schedule D, 1901, with some slight modifications.)

4. The Receipts, Appropriations and Expenditures of the City of Boston, for the Fiscal Year ending January 31, 1902, arranged according to the "Uniform System"

Boston. of the National Municipal League. Drawn up as Appendix to a Report submitted to the Mayor of Boston on May 8, 1902, by Harvey S. Chase, Public Accountant and Auditor, 8 Congress street, Boston, Member of the Committee upon Uniform Municipal Accounting of the National Municipal League, Boston, 1902. (In this publication Mr. Chase has arranged the accounts under eight schedules, viz., Schedule A, I–VIII. His Schedules A, I, IV, V, VI*a* and VI*b* correspond respectively with Schedules A, I, II, III, IV, V and VI, reported by this Committee in 1902. The Committee's Schedule A, IV [Mr. Chase's A, V] corresponds, with some modifications in the rubrics, with Schedule D of 1901. Mr. Chase's Schedules A, II, III, VII and VIII are tentative schedules.)

5. City of Boston, Statistics Department. Receipts and Expenditures of the City of Boston and County of Suffolk for the Fiscal Year 1900–01, grouped according to the "Uniform System" of the National Municipal League, Boston, 1902

(This publication, embracing four tables, was presented in print as a part of the report of this Committee at the meeting of the League in May, 1902. The tables, increased to seven in number, were published in Vol. IV, No. 6, of the "Monthly Bulletin" of the Statistics Department [of which the writer is secretary], a copy of which was sent to every member of the National Municipal League. With slight modifications Tables I, III, IV, V and VI correspond respectively with Schedules A, II, III, IV, V and VI recommended by this Committee in 1902, Tables I and VII being tentative tables. Table IV corresponds in the main with Schedule D of 1901.)

6. Department of Finance. Forty-sixth Annual Report. Finances of the City of Chicago, year ended December 31, 1902.

Chicago.

(This is the first report of the Comptroller of Chicago in accordance with the new uniform plan of accounting and auditing devised by Messrs. Haskins & Sells, Certified Public Accountants, of New York, and adopted by the City Council in November, 1901. Although no mention of the "Uniform System" of the National Municipal League appears in the report, its exhibits, schedules and summary statements conform more or less closely with that system and with the recommendations of this Committee.)

7. City of Cambridge, Massachusetts. Annual Report of the City Auditor, showing the Receipts and Expenditures for

Cambridge.

the year ending November 30, 1902. "The first part of this report," says the Auditor, Mr. Harry T. Upham, "is devoted to an exhibit of the receipts and expenditures arranged upon schedules for Uniform Municipal Accounting recommended by the National Municipal League." This arrangement was adopted on the professional advice of Mr. Chase, of this committee. The schedules employed are divided into two series, A I–VIII, as in Mr. Chase's report, May 8, 1902, to the Mayor of Boston, and series B, I–VII. The B schedules of the Cambridge report correspond in a general way with the recommendations of the report of 1902 of this Committee, but (pending the adoption by this Committee of definite rubrics and a final classification in re-

spect to assets and liabilities), must be classed as experimental schedules for the present.)

8. Annual Report of the City Comptroller to the Mayor and City Council of Baltimore for the Fiscal Year ending December 31, 1902, Baltimore, 1903. (In this report the Comptroller has arranged the statements of receipts and expenditures in accordance with Schedule D of 1901, and declares his intention of preparing a supplemental report, which shall conform throughout with the recommendations of the National Municipal League. The supplemental report has recently been issued, and embraces both A and B schedules with certain modifications to fit the peculiarities of the Baltimore accounts.)

Baltimore.

It is clear that the efforts of your Committee have begun to bear fruit; but it is manifest also from the diversity of results discoverable in the attempts thus far made to summarize the accounts of the cities named in the foregoing list, that our scheme of uniform accounts and reports is still in the experimental stage. Therefore, it does not seem wise to us to set forth any new forms of schedule at this juncture.

With regard to municipal statistics, this Committee holds to the opinion expressed in their report in 1901, viz., that "it is impracticable at present to attempt to secure uniform returns throughout the whole field of municipal statistics from any considerable number of American cities." The remainder of this report will be devoted to an attempt to justify that opinion.

Municipal Statistics.

Municipal statistics, properly speaking, include the consideration of a great variety of facts, covering a wide range of subjects. The literature of municipal statistics is not only diversified and extensive, but is marked by distinctive generic characteristics, as a glance at the publication of any well-organized European municipal statistical office will show.

The following free translation of the sub-titles in the table of contents of the ninth issue, in 1901, of the "Statistisches Jahrbuch Deutscher Städte" (Statistical Year Book of German Cities), may serve to indicate the meaning of municipal statistics where municipal statistical offices are most numerous and active:

I. Territory. Subdivision of territory by use, e.g., for streets, buildings, parks. Ownership of Land (pp. 1–13, five tables).
II. Construction and Alteration of Buildings (pp. 14–32, seven tables).
III. Street Cleaning and Sprinkling (pp. 33–41, two tables).
IV. Drainage and Sewerage (pp. 42–46, one table).
V. Public Parks, Gardens and Squares (pp. 47–50, one table).
VI. Water-works (pp. 51–60, five tables).
VII. Fire Protection (pp. 61–71, four tables).
VIII. Transportation of Passengers. Street Railways, Omnibus Lines and Cabs. (Pp. 72–77, one table for fifty cities.)
IX. Postal and Telegraph Statistics (pp. 78–82, two tables).
X. Inland Commerce and Harbors (pp. 83–119, ten tables).
XI. Savings Banks Statistics (pp. 120–136, six tables).
XII. Employment Bureaus (pp. 137–144, three tables).
XIII. Strikes and Lockouts (pp. 145–149, four tables).
XIV. Industrial Courts (pp. 150–159, five tables).
XV. Price Statistics of Necessaries of Life (pp. 160–166, two tables).
XVI. Offices for Chemical Examination (food and drug inspection, water analysis, etc.). (Pp. 167–188, six tables.)
XVII. Statistics of Incomes and Wages (pp. 189–208, fourteen tables).
XVIII. Indebtedness of Cities (pp. 209–225, two tables).
XIX. Educational Statistics (pp. 226–241, five tables).
XX. Population Statistics (pp. 242–254, eight tables).
XXI. Poor Relief and Organized Charity (pp. 255–297, nine tables).
XXII. Cattle Markets and Slaughter-houses (pp. 298–322, nine tables).
XXIII. Municipal Lighting (pp. 323–345, ten tables).
XXIV. Taxation Statistics (pp. 346–358, five tables).
XXV. Administration and Elections (pp. 359–370, nine tables). (Appendix to Section XX, pp. 371–373, two tables).

It should be noted (1) that the articles designated by the foregoing twenty-five titles (although similar articles, with like titles, are to be found in other issues of the Year Book) are practically special articles, and (2) that the list does not exhaust the recognized branches of municipal statistics. Thus the "Care of the Sick" was treated in six of the eight preced-

ing volumes, "Meteorological Conditions" in seven, "Trades Unions" in three, and "Housing and Households" in five. The Year Book is published by the Director of the City Statistical Office of Breslau, with the coöperation of nineteen gentlemen, most of whom are not only trained statisticians and the possessors of university degrees, but are also directors of a municipal bureau of statistics. No less than sixteen statistical offices, of different German cities, are represented in the authorship of the twenty-five articles enumerated in the foregoing list.

Following is a brief description of the tables grouped under "XX, Population Statistics":

Population Statistics.

I. Estimated Population, at intervals of three months, from December 31, 1898, to March 31, 1900, with enumerated Population according to the Census of December 1, 1900 (for 55 cities).

II. Marriages in 1899. In this table, which embraces 55 cities, there are given: (1) Total number of marriages; (2) the number of bachelors married to spinsters, widows and divorced women; (3) the number of widowers married to spinsters, widows and divorced women; and (4) the number of marriages of divorced men, with spinsters, widows and divorced women, respectively.

III. Divorces in 1899. In this table, which embraces 39 cities, we find: (1) The number of divorces; (2) the proportion of divorces to 1,000 marriages; and (3) the proportion of divorces to 1,000 dissolutions of marriage.

IV. Legitimation of Illegitimate Children in 1899. In this table, relating to 41 cities, we find: (1) The number of legitimated children by sex; (2) the year of birth of the same by individual years, 1894–1899, in 1893 or earlier; (3) the proportion of legitimated children to 1,000 marriages.

V. Births in 1899. In this table, for 55 cities, we find: (1) The number born alive; (a) males, females, total; (b) illegitimate, males, females. (2) Still-births; (a) by sex; (b) illegitimate, by sex; (3) aggregate births, by sex; (4) the proportion of still-births to 1,000 births; (5) number of twins, by sex; and (6) number of triplets, by sex.

VI. Deaths in 1899. In this table, for 55 cities, we find: (1) Deaths, total and by sex, exclusive of still-births; (2) deaths of children under 1 year, distinguished as to legitimacy and sex; (3) deaths of married, widowed and divorced persons, by sex; (4) deaths from 14 principal causes.

VII. Births, Deaths, Immigration and Emigration, and Marriages, in 1899.

The rubrics of this table, which embraces 55 cities (except for Immigration and Emigration for 47 cities), are under A, Proportion to the 1,000 of Mean Population (1) Born, Total Illegitimate, Born Dead; (2) Died, Total, Children under 1 year; (3) Natural Increase; (4) Immigrated, Emigrated. B, Percentage Excess of Men to Women, exclusive of still-born, of those born or died in the year. C, Still-born. D, Percentage deaths of children under 1 year to the number born.

VIII. Local Movement of Population in 1899. (a) In 25 cites: (1) Recorded number, by sex, of Immigrants and Emigrants, with excess of one over the other; (b) the same as in (a), but without distinction of sex, for 7 cities; (c) Recorded Intramural Migration, for 26 cities.

It would be quite impossible to compile a series of tables relating to population, for even the ten leading cities of the United States to match Tables I–VI in the list given above, even if all of them had well-organized departments of statistics, and it is doubtful if any city takes measures to determine the number who move into it or withdraw from it annually or decennially. Not only the reports, but the records of our leading cities, are inadequate for such purposes. The statistics of births, even in "registration cities," are notoriously untrustworthy. Thus, if we compute for 1901 the birth- and death-rates of the ten largest cities of the country on the basis of the "revised estimates" of population and the number of births and of deaths given in the "Statistics of Cities," Number 42 (September, 1902) of the Bulletin of the United States Department of Labor, we find that the birth-rate per thousand of population was 18.99, or only 1.14 above the death-rate, viz., 17.85. In other words, in an estimated population of 9,857,504, for the ten leading cities in 1901, the births, numbering 187,185, exceeded the deaths (176,000) by only 11,185. In three of the ten cities the figures given by the United States Commissioner of Labor show an excess of deaths over births for the year in question,—that excess being 1,684 for Baltimore, 2,130 for San Francisco, and 1,064 for Cincinnati, or 4,878 for the three cities. Can we wonder that unsophisticated publicists and editors raise the cry of

Untrustworthy Statistics.

"race-suicide?" The truth is that the registration of births in cities is so faulty that our "birth-rates" are valueless in many instances. "It is doubtful," says Mr. W. A. King, Chief Statistician for Vital Statistics of the Twelfth Census of the United States, "if there is a single place in which births are registered as fully as deaths."

Following European example and experience, it would be fairly easy to draw up a set of "uniform schedules" covering the principal branches of municipal statistics; but in the present state of the art of making American municipal statistics, such a procedure would be scarcely more than a counsel of perfection to a froward and unheeding generation.

Nevertheless, in view of the growing demand for improvement in certain kinds of municipal statistics, and of the probability, not to say certainty, that modern scientific methods of gathering, digesting and presenting such statistics will win their way if any considerable increase in the number of bureaus of municipal statistics shall take place, careful consideration of the generally unsystematic and frequently absurdly inaccurate methods now in vogue of estimating urban population in post- and intercensal years seems to us to be called for. The desire to institute comparisons between different cities in respect to mortality and birth-rates, per capita cost of streets, police and fire protection, etc., is wide-spread, and seems to be irresistible. But such comparisons are obviously misleading, or worse, when the estimates of population on which they are based are reached by haphazard or objectionable methods. Until the methods which are now common shall be rectified, no satisfactory system of comparative municipal statistics can be developed or established.

In October, 1898, Mr. August Herrmann, Commissioner of Water-works, Cincinnati, Ohio, read a paper on "Rates of Taxation in the Larger Cities of the United States" before the American Society of Municipal Improvements. Greater New York was then so new and amorphous that it had to be left out of account in Mr. Herrman's study of the thirty largest cities. Mr. Herrman presents an interesting and elaborate comparative table touching thirteen several points of inquiry for twenty-nine

cities. The first inquiry, "Name of City and Population, January 1, 1898?" is the only one to be considered at this juncture. According to the table, the only official estimate of population containing significant figures below the thousands' place was that for Boston. Of the remaining estimates 13 ended in 3 zeroes, 9 in 4 zeroes, and 6 in 5 zeroes. Such very round numbers of themselves suggest guess-work. Comparing these 29 "official estimates," with the census figures of 1900 for the same cities, we find that 20 of the 29 cities, or 69 per cent claimed a larger population in 1898 than was found by the enumerators two and one-half years later, in June, 1902!

If estimates equal brag, the value of per capita comparisons is likely to be an unknown, if not a minus quantity. The excess of estimated population in 1898 over enumerated population in 1900 ranged between 1,368, in St. Paul, and 151,425, in Chicago. In Cincinnati the excess amounted to 84,098, in St. Louis to 47,762, and in Omaha to 47,445. Evidences of the same generous way of making estimates are to be found in "No. 24, September, 1899, of the Bulletin of the Department of Labor, Washington, 1899." Under Statistics of Cities, Table VI, p. 656, *et. seq. op. cit.*, "Population Estimated by Health Department" is given in one column and "Estimated Population January 1, 1899," being the revised estimate of the Labor Department, is set forth in the next column but one. The aggregate population of 32 cities, for 1898, according to the estimates of their health departments, exceeded by 277,059, or 2.04 per cent, the population enumerated in June, 1900, the estimates being overestimates as compared with the census returns for 1900 in 21 cases, and underestimates in 11 cases. The revised estimates of the Labor Department give an aggregate population for the 32 cities, January 1, 1899, which exceeds by 766,135, or 5.57 per cent, the census returns for 1900, there being 23 cases of over- and 9 of underestimate. In 14 cases the estimates of the Health Departments were changed by the Labor Department, the figures being put up in 11 instances and cut down in 3 instances. The overestimates o the Labor Department ranged between 5,849 for Albany, N. Y.,

Estimated Population.

and 151,425 for Chicago, while the underestimates varied between 2,104 for New Orleans and 53,431 for Philadelphia. In the case of Omaha, the overestimate amounted to 55,445, in St. Paul to 51,950, and in Cincinnati to 89,098. Underestimates of population in 1899, as compared with enumerated population in 1900, might well be overestimates of actual population in 1899. Fortunately, in census years the estimators of population, for the most part, quit work, but they seldom have the grace to rectify their errors.

The uncertain value of "official estimates" is indicated by the range of variation in three different official estimates of the population of the City of Baltimore for the year 1898. First, we have that published in Mr. Hermann's paper, viz., 500,000. A few months later, the "Charities Review" published a paper whose writer based certain per capita comparisons relating to outdoor relief in Baltimore and other cities upon another "official estimate" of 625,270 as the population of Baltimore in the year 1898, while the official death-rates of the city for the same year were based on an estimated population of 541,000. I asked the health officer how he obtained that figure. He replied that he had asked the two leading Baltimore newspapers "independently on the same day" for their estimates of the city's population. "One said 540,000, the other 541,000, and I took 541,000." In June, 1900, the enumerators of the twelfth census could find only 508,957 people in Baltimore!

Differences in Death Rate.

The following tables giving population, deaths and death-rates, by years for the period 1890–1900, is introduced to show the differences in death-rates (the number of deaths being the same), when the estimates of population differ. The table is divided into two parts: I. Giving estimated population, number of deaths, and death-rate per thousand of population, as published by the Baltimore Health Department, and II. Corrected death-rates, based on enumerated population in 1890 and 1900, the population for other years being estimated in accordance with Farr's formula for estimating the annual geometrical increase of population in any period of time when the population at the beginning and end of the period is known.

Population, deaths and death rates for Baltimore, 1890 - 1900

	I			II — Corrected		Difference from published death rate
	*Population	Deaths	Death rate	†Population	Death rate	
1890	413,671	10,198	24.65	434,439	23.47	— 1.18
1891	426,917	10,073	23.59	441,371	22.82	— 0.77
1892	440,163	10,582	24.04	448,414	23.60	— 0.44
1893	453,409	9,554	21.07	455,569	20.97	— 0.10
1894	466,655	9,486	20.33	462,839	20.50	+ 0.17
1895	479,907	10,301	21.46	470,224	21.91	+ 0.45
1896	493,147	9,919	21.01	477,727	20.76	— 0.25
1897	506,398	9,329	18.42	485,351	19.22	+ 0.80
1898	541,000	10,385	19.20	493,094	21.06	+ 1.86
1899	541,000	10,152	18.76	500,963	20.26	+ 1.22
1900	541,000	10,700	19.78	508,957	21.02	+ 1.24

* Estimated by Health Department.

† Enumerated in 1890 and 1900, estimated according to Farr's formula in other years.

There has been marked emulation among American Health Departments in recent years to show improvement in the public health by cutting down the rate of mortality. In not a few instances the improvement claimed is fictitious. The following extract from the report of the Health Officer of Cincinnati, taken in connection with the subjoined table, shows how easy it is to save lives on paper:

"The estimated population of this city is 405,000. This estimate was reached by multiplying the registration for the presidential election of 1896 by five. This is the usual ratio adopted by statisticians as existing between the total population of a city and the registered electors.

"In comparing the estimated population of Cincinnati with that of other places, I find that it is proportionately lower than the estimates generally used by health officers of other cities in computing the annual death rate per thousand. In order that Cincinnati may show the low annual death rate to which she is entitled when the comparative statistics are tabulated, it will perhaps be well in making future reports to properly increase the estimated population. It will be noted that the death rate for Cincinnati for 1898 was 13.79 per thousand, and for 1897 it was 13.74 per thousand."

As has been noted already, the population of Cincinnati in 1900 was 325,902. The following table affords a comparison between the published death rates of the city for the five years 1896–1900, and the corrected death rates, based on the actual increase in population for the period 1890–1900.

Population, deaths and death rates for Cincinnati, 1896-1900

	I			II — Corrected		Difference from published death rate
	*Population	*Deaths	*Death rate	†Population	†Death rate	
1896	350,000	5,916	16.90	313,978	18.84	+ 1.94
1897	405,000	5,565	13.74	316,918	17.56	+ 3.81
1898	405,000	5,585	13.79	319,885	17.46	+ 3.66
1899	405,000	6,000	14.81	322,879	18.58	+ 3.77
1900	325,902	5,412	16.60	325,902	16.61	. .

* Given by Health Department; population enumerated in 1900.

† Population estimated according to Farr's formula on basis of actual increase between 1890 and 1900. Enumerated in 1900.

The report of the Health Department of St. Louis for 1900–1901 contains a table (page 377) of the "Comparative Mortality of St. Louis During the Last Thirty-four Years," with a "Note" indicating the value attached by the department to its published "Mortality Rates." The note reads as follows: "The figures of population given above appear in a number of instances, except those for the United States census years . . . to be little more than guess work, and the mortality percentage (sic) based upon them open to question. From 1890 to 1900 the increase in local population has been computed from the census figures for that year, at the rate of four per centum annually." As the actual increase of the population of St. Louis between 1880 and 1890 was only 28.89 per cent, and between 1890 and 1900 was only 27.33 per cent, the assumption of an annual increase of "four per centum" between 1890 and 1900 seems groundless, and leaves the mortality rates of the table more than ever "open to question." Inspection of the table, which shows that for five consecutive years, viz., 1882–1886 inclusive, the population was estimated at 400,000, and that the population figure for 1890, viz., 460,000, was 8,230 in excess of the census figure for that year, suggests that a considerable number of the mortality rates given in the table are of little value.

The testimony of the Health Departments of Baltimore, Cincinnati and St. Louis shows conclusively that among them was no uniformity of method in estimating the population in 1898 (and in other years as well), since the Baltimore estimate

was based on a newspaper guess, that of Cincinnati on an obsolete method, viz., that of multiplying the number of registered voters (in 1896) by five, while that of St. Louis was based on the arbitrary and incorrect assumption of an annual increase of four per cent.

Death Rate in Baltimore, Cincinnati and St. Louis.

The following tables relating to the death rates of Baltimore, Cincinnati and St. Louis for the year 1898, are introduced to illustrate the diversity of results which arises when different systems of estimating the population are employed. Table I contains four estimates of population, viz. 1. That of the local Health Department. 2. Of the United States Labor Department, for January 1, 1899. This estimate is used in determining the death rate for 1898. 3. This Committee's estimates of population, obtained in accordance with Farr's formula, for (a) January 1, 1898, and (b) June 1, 1898, on the assumption that the same rate of increase in population obtained in the period 1890–1900 as was observed in the period 1880–1890. It will be noticed that the estimates of the Committee are lower than those of the Health and Labor Departments, and that the Committee's death rates are therefore considerably higher than the published death rates. Table II shows the same figures under 1 and 2 as in Table I, inasmuch as we have no evidence whatever that the estimates and the death rates for 1898 have been corrected by the Health Departments or the Labor Department, in the light of the Census of 1900.

This Committee's estimates, etc., in Table II, may be termed "corrected estimates and death rates," as they have been derived by means of Farr's formula—in view of the rate of increase in population which actually took place in the period 1890–1900. Of course neither the Health Department nor the Labor Department could know what that rate was until after the census enumeration of 1900; but they might have estimated the population of the three cities on a uniform basis, i. e., the annual geometrical increase, derived from the rate of growth between 1880–1890, but inspection of Table I does not suggest that they did so.

I. Death rate in Baltimore, Cincinnati and St. Louis in 1898. Estimated population being based on rate of increase between 1880 - 1890

Estimates (Post-censal) by	Baltimore, 1898		Cincinnati, 1898		St. Louis, 1898	
	Population	Death rate	Population	Death rate	Population	Death rate
1. Health Department for 1898 .	541,000	18.82	405,000	12.86	623,000	14.13
2. Labor Department for January 1, 1899 . .	541,000	18.82	415,000	12.56	623,000	14.13
3. National Municipal League Committee:						
(*a*) On January 1, 1898	532,335	19.12	333,084	15.65	547,635	16.08
(*b*) On June 1, 1898	538,312	18.91	335,195	15.55	553,456	15.91
*No. of deaths in 1898	10,180	. .	5,211	. .	8,805	. .

*As stated by Labor Department.

II. Death rates in Baltimore, Cincinnati and St. Louis in 1898. Estimated population in 3 (a) and 3 (b) being based on rate of increase between 1890 - 1900

Estimates (Intercensal) by	Baltimore, 1898		Cincinnati, 1898		St. Louis, 1898	
	Population	Death rate	Population	Death rate	Population	Death rate
1. Health Department for 1898 .	541,000	18.82	405,000	12.86	623,000	14.13
2. Labor Department for January 1, 1899 . .	541,000	18.82	415,000	12.56	623,000	14.13
3. National Municipal League Committee:						
(*a*) On January 1, 1898	489,853	20.78	318,645	16.39	542,612	16.23
(*b*) On June 1, 1898	493,094	20.65	319,885	16.29	548,102	16.07
No. of deaths in 1898	10,180	. .	5,211	. .	8,805	. .

Further evidence of a lack of system in estimating population is found in these facts: (1) the Health Department of Baltimore used the same estimate of population, viz., 541,000 in computing death rates for 1898, 1899, 1900; (2) the Health Department of Cincinnati, used its estimate of population

viz., 405,000, in deriving its official death rates for the years 1897, 1898 and 1899; (3) the Health Department of St. Louis based its official death rates for 1898 and 1899 on the same estimated population, viz., 623,000; and (4) the revised death rates of the United States Labor Department for 1898 were based on its estimate of population on January 1, 1899; for 1899, on the census figures of June 1, 1900; and for 1900 on the same estimate of population, viz., the census figures of June 1, 1900, as was used in determining the death rates for 1899.

Lighting and Education in the same Cities.

The following table (giving total and per capita expenditures for "lighting" and "Education" in the cities of Baltimore, Cincinnati and St. Louis, in 1898, according to various estimates of population of these cities) shows the futility of attempting to compare the per capita cost of the same kinds of service when uniformity of method in estimating population is lacking:

Estimates of Population for 1898 by

Cities	1. Mr. Herrmann	2. Health Department	National Municipal League Committee		5. United States Labor Department January 1, 1899
			3. *Rate of growth 1880–1890	4. †Rate of growth 1890–1900	
Baltimore	500,000	541,000	538,312	493,094	541,000
Cincinnati	410,000	405,000	335,195	319,885	415,000
St. Louis	623,000	623,000	553,456	548,102	623,000

Per Capita Expenditures on Estimated Population by

Cities	Expenditures for Lighting	1. Mr. Herrmann	2. Health Department	National Municipal League Committee		5. United States Labor Department
				3. *Rate of growth 1880–1890	4. †Rate of growth 1890–1900	
Baltimore	$375,000	$0 75	$0 69	$0 70	$0 76	$0 69
Cincinnati	335,140	82	83	99	1 05	80
St. Louis	377,594	61	61	68	68	61
	Expenditures for Education					
Baltimore	$1,430,000	2 86	2 64	2 66	2 90	2 64
Cincinnati	1,275,100	3 11	3 15	3 80	3 99	3 07
St. Louis	1,957,000	3 14	3 14	3 54	3 57	3 14

*The rate of growth, 1880–1890, was as follows, for Baltimore, 30.73; Cincinnati, 16.37 St. Louis, 28.89.

†The rate of growth, 1890–1900, was as follows, for Baltimore, 17.15; Cincinnati, 9.77; St. Louis, 27.33.

Striking evidence of the difficulty of compiling comparative municipal statistics on a large scale is afforded by the experience of the United States Department of Labor, which was authorized by Act of Congress, in July, 1898, "to compile and publish annually an abstract of the main features of the official statistics of the cities of the United States having over 30,000 population." The original plan of the Department was to use published reports. This plan was soon abandoned, "owing to the lack of uniformity in the reports, and in many cases to the lack of reports themselves. . . . . A schedule of inquiries was therefore prepared, and the work taken up by the special agents of the Department by personal visits to the various officials of the cities coming within the scope of the investigation."

Federal Municipal Statistics.

The Department has published in its Bulletin four series of tables, entitled "Statistics of Cities," for 1898, 1899, 1900 and 1901, respectively. The abstract for 1901 included 137 cities. With a view to giving additional information the number of the tables has been increased from eighteen for 1898 to twenty-five for 1901. Despite the use of uniform schedules by special agents in the collection of data, the published death rates and per capita estimates of expenditures for the several years included in the period 1898–1901 seem not to be strictly comparable with each other. Estimated population is a datum of fundamental importance in computing death rates and per capita estimates. Yet inspection of the tables set forth in the Bulletin of the Labor Department shows that a uniform method of estimating population was not followed in each of the four years. Death rates, etc., for 1898 were based on the estimated population for January 1, 1899, and the death rates for 1901 on a similar estimate for January 1, 1902, while the death rates, etc., for 1899 and 1900 were based on the census returns for June 1, 1900.

Moreover, it seems clear that the agents have not always been able to secure "uniform data" in respect to the financial operations of certain cities. Thus the City of Boston is credited with $5,877,595 receipts from liquor licenses in the four years

1898–1901, inclusive, no allowance being made of the fact that under the law twenty-five per cent of the receipts from such licenses were turned over to the State of Massachusetts. The city's income from this source, for the four years, was overstated by $1,469,399, or $367,350 a year on the average.

Diversity from Year to Year.

Again, there was evident diversity of method in different years, at least so far as the financial statistics for Boston are concerned, in the treatment of loans and the payment of debt. In that city temporary loans in anticipation of taxes are used chiefly to defray current expenses, and are paid in full during the year in which they are issued. The law forbids considering them in determining the debt limit. In the Bulletin for 1898 temporary loans form no part of the income from loans. In that year they amounted to $3,500,000. They rose from $4,210,000 in 1899 to $6,500,000 in 1901; and help to make up the total under "Loans" in each of the years 1899–1901, but are not separately shown, on either side of the account, except in 1901. "Liquidation of Debt" in 1898 included bonds redeemed, but not temporary loans. In 1899, temporary loans were included. They were included also in "Loans Repaid" in 1900, and in 1901, being separately shown for the last-named year. Payments from the sinking fund for the redemption of debt are expressly excluded from "Loans Repaid" in 1900 and 1901, so that it is difficult to discover from these figures how much the funded debt was reduced in either of those years. The Bulletin gives $17,356,000 as the amount of Boston's income from "Loans" in 1899, whereas the amount of debt created in that year by the issue of bonds was only $8,740,000, the remainder of the amount specified being made up of (1) temporary loans, in anticipation of taxes, $4,210,000, and (2) $4,396,000, paid to the treasurer from the Sinking Funds, for the redemption of debt. The last-mentioned amount was not a loan in any sense.

I have compiled a table from "No. 42 of the Bulletin of the Department of Labor, September, 1902," showing the "Temporary Loans" and "Loans Repaid" for the ten largest cities of the United States in 1901, but omit the table here for lack of

space. St. Louis, Baltimore, Buffalo, San Francisco and Cincinnati appear to have issued no temporary loans during the year. The following table, for the remaining five cities, shows with respect to temporary loans and bonds running less than two years: (1) The percentage of such loans to the income for the year from loans of all kinds, and (2) the percentage of such loans to total receipts for the year.

Table Showing Percentage in 1901 of

Names of Cities	1. Temporary Loans, etc. to all Loans	2. Temporary Loans, etc. to Total Receipts
1. New York	64.13	30.63
2. Chicago	91.92	13.26
3. Philadelphia	11.73	2.48
4. Boston	52.12	13.25
5. Cleveland	38.88	5.84

Inspection of the foregoing table indicates a considerable diversity of policy in the issuance of temporary loans in the cities named. It should be noted that a further reason for exercising caution in comparing the income derived from temporary loans in the above-mentioned cities is found in the fact that in 1901 the amount of temporary loans repaid exceeded the amount issued in Chicago and Philadelphia, being less in New York and Cleveland, while in Boston, as is customarily the case, temporary loans repaid exactly equaled temporary loans issued.

Conclusions.

It is our belief that municipal statistics, like charity, should begin at home; that they should relate to the objects and needs of local administration and be prepared with the primary purpose of enlightening a local public opinion and of serving local authorities as the basis for intelligent action. Know thyself, is an injunction which applies as well to cities as to individuals. So long as a city does not know itself it cannot know other cities, or compare itself with them, or profit largely by their experience. The sooner our leading cities are led to insist upon having simple and intelligible financial and statistical reports furnished by their own servants for home use, the

sooner will the public and official mind become responsive to the demands of such bodies as this for the adoption of more modern and scientific methods of book-keeping and house-keeping by all cities ; and the sooner will it become possible for the students of municipal affairs and for state and national officials and bureaus to secure from city officials and publications such information as is usually unattainable now.

We are not disposed to underrate the importance of concerted action in this matter on the part of representative associations of scientific and professional men ; but would emphasize the fact that our efforts are likely to prove abortive unless the present undeveloped state of the art of municipal house-keeping and book-keeping, in most cities, is borne in mind. In discussing plans and devising measures to secure reasonable uniformity in municipal accounting and statistics, we do well to recognize the standards of idealistic seekers after scientific truth ; but we should not lose sight of the fact that, in practice, we shall have to depend, for the most part, upon other kinds of men for some time to come.

The domain of American municipal statistics, using the term in its scientific sense, presents such wide areas of unsettled, not to say unexplored, territory that, as I have already intimated, it seems a wiser policy, for the present, to postpone ambitious schemes of expansion until our home fields have been subjected to a more intensive and productive system of cultivation than is yet common.

For the Committee,

EDWARD M. HARTWELL, *Chairman.*

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